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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,563	12/17/2001	Yusuke Kobayashi	Q67758	6227

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11/14/2003

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EXAMINER

RADA, ALEX P

ART UNIT

PAPER NUMBER

3714

DATE MAILED: 11/14/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/015,563

Applicant(s)

KOBAYASHI, YUSUKE

Examiner

Alex P. Rada

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

In response to the amendment filed August 28, 2003 in which the applicant provides correction to the specification, adds a new drawing, amends claim 7, adds new claim 14, and claims 1-14 are pending in this office action.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the nozzles from which air is blown toward the bottom face of the self-propelled member are formed on the traveling field to form an air bearing layer between the bottom face and the traveling field to support the self-propelled member thereon as recited in claim 7; a skirt member is formed on a peripheral portion of the bottom face of the self-propelled member as recited in claim 8; and the self-propelled member includes a compressor for blowing compressed air toward the traveling field through nozzles formed on the bottom side thereof, to form an air bearing layer between the bottom face and the traveling field to support the self-propelled member thereon as recited in claim 9, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The amendment filed August 28, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material, which is not supported by the original disclosure, is as follows: The new drawing of Fig 12A the compressor 120 is disposed below the platen 72, arrows in the figure, air from the compressor 120 is blown toward the lower face of the self-propelled member 70 via opening formed in the platen 72 so that the air is caused to flow in every direction along the lower face of the self-propelled member 70, and a skirt member 84 is provided around a circumferential portion of the lower face of the self-propelled member 70.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-4, 10-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa '490 in view of Sutoki JP '944.

5. Nakagawa discloses a track racing game having, a racing track; a traveling field, a plurality of miniature members, which are provided on the racing track to be raced with each other while being associated with the respective self-propelled members, each miniature member

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including: front wheels and rear wheels (figure 3) provided on a bottom face thereof for supporting the miniature member on the racing track (6), the front wheels being provided as caster wheels and a second magnet provided in a front side of the caster wheels while being magnetically coupled with the first magnet, in which the examiner interprets the magnetic unit 18 is an equivalent function to the claimed magnet provided in a front side of the caster wheels while being magnetically coupled with the first magnet as recited in claims 1 and 14; the second magnet is pivotable about a pivot center provided on the bottom face of the miniature member at a front side of the front wheels, in which the examiner interprets the magnetic unit 18 to be a functional equivalent to second magnet pivotable about a pivot center as recited in claim 10; the miniature member includes rollers that are provided on the bottom face thereof in the vicinity of the second magnet, for supporting the miniature member on the racing track (figure 3) as recited in claim 11; and the second magnet is rotatable about a rotation center provided on the bottom face of the miniature member at a front side of the front wheels, in which the examiner interprets the magnetic unit 18 to be a functional equivalent to the second magnet is rotatable about a rotation center provided as recited in claim 12. Nakagawa does not expressly disclose platen dots, a plurality of self-propelled members provided on the traveling field, each self-propelled member including: a first yoke, which constitutes a first linear motor together with the platen dots for propelling the self-propelled member in a first direction on the traveling field; a second yoke, which constitutes a second linear motor together with the platen dots for propelling the self-propelled member in a second direction which is perpendicular to the first direction; and a first magnet provided in an upper portion of the self-propelled member as recited in claim 1; each of the first yoke and the second yoke is formed with three legs provided with coils, to

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constitute three-phase linear motors as recited in claim 3; and a lower end portion of each leg is split into plural projections each having an identical width with a width of each of the platen dots as recited in claim 4.

Sutoki teaches platen dots, a plurality of self-propelled members provided on the traveling field, each self-propelled member including: a first yoke, which constitutes a first linear motor together with the platen dots for propelling the self-propelled member in a first direction on the traveling field; a second yoke, which constitutes a second linear motor together with the platen dots for propelling the self-propelled member in a second direction which is perpendicular to the first direction; and a first magnet provided in an upper portion of the self-propelled member. By having a linear motor with platen dots, one of ordinary skill in the art would be able to provide smooth movement in and X and Y direction without producing ripples. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to modify Nakagawa to include platen dots, a plurality of self-propelled members provided on the traveling field, each self-propelled member including: a first yoke, which constitutes a first linear motor together with the platen dots for propelling the self-propelled member in a first direction on the traveling field; a second yoke, which constitutes a second linear motor together with the platen dots for propelling the self-propelled member in a second direction which is perpendicular to the first direction; and a first magnet provided in an upper portion of the self-propelled member as taught by Sutoki. To do would provide smooth movement of an object in and X and Y direction without producing ripples.

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6. Claims 2 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa `490 in view of Sutoki JP `944 as applied to claim 1 above, and further in view of Helm `021.

7. Nakagawa in view of Sutoki disclose the claimed invention as discussed above except for ball bearings are provided on the bottom face to assist the propelling on the traveling field as recited in claim 2 and the ball bearing s are composed of at least three independent ball bearings as recited in claim 5.

Helm teaches ball bearings being substituted for wheel on the bottom face to assist the propelling on the traveling field having at least three independent ball bearings, in which the examiner interprets to be the wheels (4) being replaced with ball bearings (figure 3 and column 3, lines 11-17) as recited in claims 2 and 5. By having ball bearing to assist the propelling on the traveling field, one of ordinary skill in the art would be able to provide an alternative to the conventional wheel for high-speed transportation. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to modify Nakagawa/Sutoki to include ball bearings are provided on the bottom face to assist the propelling on the traveling field and the ball bearing s are composed of at least three independent ball bearings as taught by Helm. To do so would allow a smooth and fast transportation system.

8. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa `490 in view of Sutoki JP `944, and Helm `021 as applied to claims 1-2 above, and further in view of Li `271.

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9. Nakagawa in view of Sutoki JP and Helm disclose the claimed invention as discussed above except for the ball bearings are supported within an annular retainer formed on the bottom face of the self-propelled member to constitute a thrust bearing as recited in claim 6.

Li teaches ball bearings being supported within an annular retainer to constitute a thrust bearing. By having ball bearing supported within an annular retainer to form a thrust bearing, one of ordinary skill in the art would be able to provide easy movement in any direction. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to modify Nakagawa/Sutoki/Helm to include ball bearings being supported within an annular retainer formed on the bottom face of the self-propelled member to constitute a thrust bearing as taught by Li. To do so would provide easy rotation and movement of an object without being limited by direction.

Regarding claim 13, the particular conductive layer formed on the traveling field for supplying power used is a matter of design choice, wherein no stated problem is solved, or unexpected result obtained, by using the specific conductive layer formed on the traveling field for supplying power claimed versus the conductive layer formed on the traveling field for supplying power taught by the prior art.

Response to Arguments

10. Applicant's arguments filed August 28, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the

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teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the suggestion to combine can be found in the abstract wherein a 3-phase planar linear motor, which facilitates smooth movements in X- and Y-directions respectively without producing, ripples.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex P. Rada whose telephone number is 703-308-7135. The examiner can normally be reached on Monday - Friday, 08:00-16:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

mt
apr



S. THOMAS HUGHES
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